Weather

4-4 The student will demonstrate an understanding of weather patterns and phenomena. (Earth Science)

4.4.2 Classify clouds according to their three basic types (cumulus, cirrus, and stratus) and summarize how clouds form.
Taxonomy level: 2.3 and 2.4-A, B Understand Factual and Conceptual Knowledge

Previous/Future knowledge: In 1st grade (1-3.1), students recognized clouds as a feature of the day and night sky. In 2nd grade (2-3.5), students used pictorial weather symbols to record sky conditions. In 6th grade (6-4.3), students will classify shapes and types of clouds according to elevation and their associated weather conditions.

It is essential for students to know that there are three basic types of clouds. These clouds can be classified based on their observable characteristics.

Cumulus
- Puffy, lumpy-looking clouds often with a flat bottom.
- When cumulus clouds are dark they usually bring rain; white cumulus clouds do not bring rain.

Cirrus
- High, thin, wispy clouds.
- They are formed mostly of ice crystals.
- Cirrus clouds are most often associated with fair weather.

Stratus
- Layers of clouds that spread out covering a large area.
- Stratus clouds are often lower in the sky.

The formation of clouds happens when water vapor in the air rises, cools and condenses (or moves from a warm place to a cool place and condenses), forming the water droplets that make up a cloud. A cloud is a collection of tiny, liquid water droplets not water vapor gas.

It is not essential for students to know the combination of cloud names.

Assessment Guidelines:
The objective of this indicator is to *classify* clouds types; therefore the primary focus of assessment should be to determine the cloud type based on the description. However, appropriate assessments should also require students to *recognize* clouds; or *illustrate* clouds using pictures or words.

Another objective of this indicator is to *summarize* how clouds form; therefore, the primary focus of that assessment should be to generalize the major points about the process of the forming of clouds. However, appropriate assessments should also require students to *recall* what a cloud is; or *classify* by sequencing how clouds form.